

Claim Amendments

What is claimed is:

1-85 (Canceled).

86. (New). A disposable photometrical micro sensor for determining the concentration of a sample of blood of 0.50 microliters or less, comprising:

- a solid micro optical fiber having a first end and a second end, wherein said first end and said second end have substantially the same cross-sectional area;

- said first end is mounted with a reagent pad containing all the necessary chemicals and enzymes for a specified analysis and is adapted to receive a sample;

- said second end of said micro optical fiber is inserted into a housing of a detection device for emitting and receiving light signals between the first end and the detection device

- said detection device comprising

- a light source adapted to emit light through said solid micro optical fiber onto said reagent pad,

- a photo detector adapted to detect reflected light from said reagent pad through said optical fiber in response to said emitted light,

- a processor adapted to convert said reflected light to said analyte concentration,

- a display adapted to display said analyte concentration;

- wherein said sensor is adapted to calculate said analyte concentration from a sample volume of about .1 microliters to about .5 microliters.

87. (New). The sensor of claim 86, wherein said solid micro optical fiber is a single fiber.

88. (New) The sensor of claim 86, wherein said solid micro optical fiber is a fiber bundle.

89. (New). The sensor of claim 86, wherein said solid micro optical fiber has a diameter of between .01 millimeters to 5.0 millimeters.

90. (New). The sensor of claim 86, wherein said solid micro optical fiber is between .1cm and 100cm in length.

91. (New). The sensor of claim 86, wherein said reagent pad is a membrane impregnated with dry chemical and enzymes.

92. (New). The sensor of claim 86, wherein said reagent pad is a cast membrane.

93. (New). The sensor of claim 86, wherein said solid micro optical fiber is made from the group consisting of glass, plastic, or a combination of glass and plastic.

94. (New). A disposable photometrical micro sensor for determining the concentration of a sample of blood of 0.50 microliters or less, comprising:
 an elongated piece of micro plastic tubing having a first end and a second end, wherein said first end and said second end have substantially the same cross-sectional area;
 said first end is mounted with a reagent pad containing all the necessary chemicals and enzymes for a specified analysis and is adapted to receive a sample;
 said second end is inserted into a housing of a detection device for emitting and receiving light signals between the first end and the detection device
 said detection device comprising
 a light source adapted to emit light through a fiber optic probe onto said reagent pad,
 a photo detector adapted to detect reflected light from said reagent pad through said fiber optic probe in response to said emitted light,
 a processor adapted to convert said reflected light into said analyte concentration,
 a display adapted to display said analyte concentration;
 wherein said sensor is adapted to calculate said analyte concentration from a sample volume of about .1 microliters to about .5 microliters.

95. (New). The sensor of claim 94, wherein said fiber optic probe is a single fiber.

96. (New) The sensor of claim 94, wherein said fiber optic probe is a fiber bundle.

97. (New). The sensor of claim 94, wherein said fiber optic probe has a diameter of between .01 millimeters to 5.0 millimeters.

98. (New). The sensor of claim 94, wherein said fiber optic probe is between .1 cm and 100 cm in length.

99. (New). The sensor of claim 94, wherein said reagent pad is a membrane impregnated with dry chemical and enzymes.

100. (New). The sensor of claim 94, wherein said reagent pad is a cast membrane.

101. (New). The sensor of claim 94, wherein said fiber optic probe is made from the group consisting of glass, plastic, or a combination of glass and plastic.

102. (New) The sensor of claim 94, wherein said housing has a substantial pen shape.

103. (New) The sensor of claim 94, wherein said fiber optic probe is adapted to be retractable into said detection device.

104. (New) The sensor of claim 103, wherein said fiber optic probe is adapted to assume a first position inside said detection device and a second position at least partially outside said detection device, wherein the fiber optic probe is adapted to receive said micro plastic tubing when in said second position.